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This paper reviews some of the weaknesses in the present account classification system for public schools (the minimum function-object account classification system) and suggests a three-dimensional expenditure classification system to replace it. These three dimensions are: (1) The "type-of-school" dimension which considers such information as the number and types of schools maintained and the amounts spent for each type, (2) the "function-object" dimension which is similar to the present system but contains appropriate changes, and (3) the "scope-of-service" dimension which segregates expenditures for the major categorically aided programs. This suggested system relates revenues to expenditures so that the net cost to unrestricted income of vocational education, compensatory education, special education, and pupil transportation is emphasized. In addition to supplying information needed by local school boards, the system supplies information needed by state legislatures and Congress concerning actual costs of aided programs. (HW)

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A THREE-DIMENSIONAL PROGRAM ACCOUNT CLASSIFICATION SYSTEM FOR PUBLIC SCHOOLS*

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U.S. DEPARTMENT OF HEALTH, EDUCATION & WELFARE
OFFICE OF EDUCATION

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ABSTRACT

This paper suggests a three-dimensional account classification system for public school expenditures. The dimensions are a) type of school, b) the standard function-object classification, and c) a scope-of-service classification. The latter dimension segregates expenditures for the major categorically aided programs.

The suggested system relates revenues to expenditures so that the net cost to unrestricted income of vocational education, compensatory education, special education, and pupil transportation is emphasized.

In addition to supplying information needed by local school boards, the system produces information needed by state legislatures and Congress concerning actual costs of "aided" programs.

A THREE-DIMENSIONAL PROGRAM ACCOUNT CLASSIFICATION SYSTEM FOR PUBLIC SCHOOLS

by Erick L. Lindman

Recent interest in program budgeting presents an opportunity to improve the public school accounting system which has evolved since the turn of the century. The system was established when public schools offered for all students a single program with few, if any, auxiliary services. Since then, school programs have become complex and varied, and the single-dimensional accounting system, even with its amendments and additions, is hopelessly inadequate. Its inadequancy is especially noticeable when school administrators attempt to apply the concepts of program planning and budgeting to school systems.

Indeed, the key step to effective program budgeting is the development of a program-oriented expenditure classification system for public schools. To do this, there must first be sufficient concensus concerning the proposed "programs," so that the U. S. Office of Education can establish account classifications for them in its accounting guide for public schools.

This paper reviews briefly some of the weaknesses in the present system and suggests a three-dimensional expenditure classification system to replace it.

The Present System

The minimum function-object account classification system recommended by the U.S. Office of Education for public schools includes the following major categories:

1. Administration
2. Instruction
3. Attendance and Health Services
4. Pupil Transportation
5. Operation of Plant
6. Maintenance of Plant
7. Fixed Charges
8. Food Services
9. Community Services
10. Capital Outlay
11. Debt Services
12. Transfer Accounts

This list contains many inconsistencies that tend to obscure essential information about public school expenditures. The list is intended to be a "function-object" breakdown of school expenditures. Although one can accept as "functions" such items as "administration," "instruction," "operation of plant," "maintenance of plant," etc., the item called "community services" is a different kind of item. It is neither a function nor an object. Instead, it identifies a clientele other than school children and describes a type of service. Moreover, expenditures in this item could be classified quite properly under the other function-object categories such as "administration," "operation of plant," etc.

When a client-oriented item is included in a list of function-object items, confusion is inevitable.

Pupil transportation is another item which has special characteristics making it inappropriate for a "function-object" classification system. Often in computing the per-pupil cost of education, the cost of pupil transportation is omitted to make unit costs more comparable. Like "community services" this item could be allocated to the other functional categories, such as "administration," "operation and maintenance of plant," etc.

To illustrate the basic inconsistency of including pupil transportation in the function-object classification system, one need only ask the question: Should the cost of insurance for school buses be included under "pupil transportation" or under "fixed charges," where all other insurance costs are classified?

In answering this question, the U. S. Office of Education was influenced by the fact that most states provide aid to local school systems for pupil transportation. For this reason, it is necessary to know the total cost of pupil transportation, and the decision was made to include the cost of insurance for school buses under "pupil transportation," not under "fixed charges." It was not so important to know the total amount spent for insurance and, if needed, this could be obtained by a special tabulation.

The cost of pupil transportation is usually excluded from comparative studies of current expenditures per pupil and is often reimbursed in whole or in part from state funds. Moreover, the expenditures for pupil transportation could be classified appropriately under other items of the function-object classification

system. The inclusion of this item in the "function-object" list creates confusion.

School lunch service is an illustration of another item that causes more than its share of confusion. Normally, this item is only a small part of the actual outlay for school lunches, since it includes only the taxpayers' contribution. Receipts from the Federal government are usually included in this expenditure, but receipts from the sale of lunches are excluded. The total expenditure for school lunches indicating the size of the program is not shown. Moreover, the Federal contribution is not readily apparent. Yet, this is the kind of information the public is interested in.

These illustrations of inadequacies in the basic account classification system for public schools indicate why the system is unsatisfactory for program budgeting purposes. To provide a satisfactory system, it is necessary to classify school expenditures in a more meaningful and logically consistent way. The proposed three-dimensional system is intended to accomplish this purpose.

The Type-of-School Dimension

School systems differ greatly in the types of schools maintained, and no comparative cost study or program planning process can be effective without information concerning this dimension, including the number and types of schools maintained and the amounts spent for each type. For this purpose, it is proposed that the current expenditures of public schools be classified into the following type-of-school categories:

1. Prekindergarten
2. Elementary Schools
3. Junior High Schools
4. Senior High Schools
5. Adult or Evening Schools
6. Summer Schools
7. Special Schools
8. Community Services

By dividing the total amount expended by a school system among these eight client-oriented categories, it is possible to make comparisons with similar cost breakdowns for prior years or for other school systems, and to present to the public an accurate picture of amounts spent for various groups served.

It will be noted that the only item taken from the function-object account classification list is "community services." Other items in the type-of-school dimension have been used for analytical purposes for many years, but in an unsystematic fashion. Valid statistics concerning amounts spent for "summer schools" and "adult schools" are difficult to obtain. The categories in this dimension need to be defined more precisely and incorporated into state and local school accounting procedures.

The Function-Object Dimension

There are many advantages in retaining the well-established function-object account classification, provided appropriate changes are made. Such items as "community services," "pupil transportation," and "cafeteria service" should not be included in

this dimension. It is proposed that this dimension include the following major categories:

Instruction

1. Principals' and Supervisors' Salaries
2. Classroom Teachers' Salaries
3. Other Professional Salaries
4. Clerical and "Paraprofessional" Salaries
5. Books
6. Instructional Supplies
7. Instructional Equipment
8. Other Costs of Instruction

Support Services

1. Administration
2. Operation of Plant
3. Maintenance of Plant
4. Pupil Transportation
5. Other Support Services
6. Fixed Charges

In this list health services, food services, and community services are included under other support services. These items, along with pupil transportation, are also included in the scope-of-services dimension. Transfers, debt service, and capital outlays are excluded from this list; they are shown in the fiscal summary. (See Table IV.)

This dimension indicates different amounts spent for the functions and objects in the school budget. Not only does this cost breakdown preserve historical continuity, but it also provides analytical information concerning each program identified in the type-of-school dimension. The function-object account classification becomes more meaningful when combined with the other two dimensions.

The major subcategories listed in this dimension follow current practice rather closely. Probably some changes in the subcategories under instruction are needed. Pupil guidance and library services need to be identified along with expenditures for educational TV and computer-assisted instruction. These subcategories should be included under the broad category of instruction.

The Scope-of-Service Dimension

Public school revenues come from the state and the Federal government as well as from local tax sources. In this respect program planning and budgeting for public schools differ fundamentally from Federal departments. Moreover, the actual amounts contributed by the state and by the Federal government are affected by the types of "programs" maintained by the school district. For this reason, techniques used in Federal departments are not directly applicable to public schools. Effective program planning and budgeting for public schools must be based upon adequate analyses of potential income from state and federal sources restricted to specific programs.

In addition to describing the scope of service offered, this dimension is intended to clarify for purpose of local school program planning the effects of categorical aids from state and Federal sources, and, of equal importance, to provide essential information for state legislators and United States Congressmen, so that they may see more clearly the effects of their appropriations upon local school operations.

The proposed scope-of-service account classification system includes the following major categories:

1. The Basic Program
2. Vocational Education
3. Special Education
4. Compensatory Education
5. Health Services
6. Pupil Transportation
7. Lunch Program
8. Other Supplementary Programs

Most of these programs are related to sources of income. The basic program in most states is related to income to support the foundation program. One of the purposes of the scope-of-service dimension is to clarify this relationship. Hopefully, segregation of expenditures for the basic program will clarify for legislators amounts needed for the jointly financed public school foundation program. For local boards of education this account classification would show the amount and purpose of local funds contributed to supplement the state foundation program.

Categorical aid for vocational education has been provided by the Federal government since enactment of the Smith-Hughes Act in 1917. It is not likely that this type of aid will be discontinued in the near future. In recent years the Federal government has accepted greater responsibility for full employment which portends increasing Federal interest in vocational education. For this reason, a precisely defined account classification for vocational education is needed so that its cost and Federal contributions to it can be determined accurately.

Nearly every state provides categorical aid to local school districts to help meet the cost of educating children who are handicapped or have special educational needs. The state aid is usually intended to cover the "excess cost" of these programs--the excess cost being defined as the difference between the per-pupil cost of the special program and the per pupil cost of the basic program. In order to determine the appropriate state contribution, it is necessary to know the amounts expended in the first and third categories of the income-related dimension. Without this dimension, confusion and misunderstanding concerning the financing of special education is inevitable.

The recently enacted Federal program for compensatory education for disadvantaged children provides a substantial amount of money each year and is likely to continue for many years. For this reason, it is necessary to develop a uniform method for computing the cost of compensatory education. This is necessary not only to inform the United States Congress, but also to show local school boards the total cost of compensatory education, the Federal contribution, and the net cost to local taxpayers.

In order to equalize school tax burdens, states generally provide categorical aid for pupil transportation. For this reason, pupil transportation is included in the scope-of-service dimension. It is the only item which occurs in the same form in two different dimensions. Both the local board of education and the state legislature need to know how much is spent for pupil transportation and how much the state is contributing for this purpose.

Similarly, the school lunch program is included in the income-related dimension to show its total cost and sources of income. Under present accounting procedures, recommended by the U. S. Office of Education, accurate information concerning total amounts expended for lunches is not recorded in school fiscal reports. The present practice of including among the function-object items an amount for school lunches that is not the total cost but the amount contributed from tax sources is unnecessarily confusing.

Finally, an item for other programs is provided. In California and in a number of states, this item would include driver education. Developmental programs such as those provided for in Title III of the Elementary and Secondary Education Act of 1965 and in the National Defense Education Act would also be included in this category. While these programs usually involve relatively small sums of money, they attract attention because they are "innovative" and are often Federally supported. Although grants for this purpose may be discontinued in the near future, efforts to find new ways to educate children in schools are expected to continue.

Displays and Report Forms

Using these three dimensions some very informative reports can be prepared. For each type of school maintained by a school district, a matrix can be prepared showing function-object categories vertically at the left of the page and scope-of-service categories across the top of the page. Below the total for each scope-of-service category can be shown the income earned by programs in that category so that the net cost to unrestricted funds is shown for each category.

Another very informative matrix would show the type-of-school categories vertically at the left of the page and the scope-of-service categories across the top of the page. This display would show the variety of services provided for each type of school.

Table I shows program expenditures by objects for elementary schools. This table provides a basis for analyzing expenditure objects for each program for elementary schools. Similar tables could be prepared for each type of school, giving the school board and the public a clear picture of the scope of service and costs for each type of school maintained by the school district.

Table II shows total general fund expenditure by type of school and by program, giving a summary of cost of each service for each type of school maintained. It calls attention to services not provided; for example, no transportation, health, and lunch service for adult education.

Table III is extremely important since it relates expenditures to income sources. It is an essential planning exhibit for each local school board, and indicates how local unrestricted

funds are actually used and how the fiscal condition of the school district would be affected by eliminating or reducing any of the "aided" programs.

Moreover, the format of Table III, using statewide totals, provides essential information for the state legislature and Congress. In this table the relationship between amounts appropriated to aid special programs is related directly to the cost of these programs.

Table IV, the fiscal summary, is included to emphasize that outgoing transfers, debt service expenditures, and operating resources would not be classified by the three-dimensional system. They would be used to show the condition of the general fund and would be reported both in the budget and in the annual report as single, unclassified items. Only the "Program Expenditures" would be classified according to the suggested three-dimensional system.

These tables indicate the types of analyses that can be made using a three-dimensional approach to the classification of public school expenditures if one of the dimensions is based on programs identified and aided by state legislatures and Congress. However, only those aided programs that are substantial and continuing have been identified. Small and temporary programs have been combined into a single "Other Programs" category.

The items suggested for the three dimensions represent broad categories, and they will need to be subdivided to give additional information. For example, using these subdivisions, it should be possible to segregate general fund expenditures for

capital outlays and equipment replacement. Possibly a category for contracted services is needed. Expenditures for teachers' salaries could be classified according to teaching assignment.

This approach to program accounting assumes that some categorical aids will continue and perhaps expand, and that public school program budgeting will be concerned increasingly with income-related programs. Hopefully, if the number of such programs established in the accounting system is limited, their excessive proliferation can be avoided.

I. ELEMENTARY SCHOOL EXPENDITURES BY PROGRAM 1968-69

Objects Purchased	Basic Prog.	Voc. Educ.	Spec. Educ.	Comp. Educ.	Health Service	Pupil Trans.	Lunch Prog.	Total
Instruction								
1. Prin. & Sup. Salaries								
2. Classroom Teachers' Salaries								
3. Other Professional Salaries								
4. Clerical & Paraprof. Salaries								
5. Books								
6. Instructional Supplies								
7. Instructional Equipment								
8. Other Costs of Instr.								
Total for Instruction --								
Support Services								
1. Administration								
2. Operation of Plant								
3. Maintenance of Plant								
4. Pupil Transportation								
5. Oth. Support. Services								
6. Fixed Charges								
Total Support Ser.--								
Grand Total -----								

II. SCOPE OF SERVICE - ALL SCHOOLS & PROGRAMS - 1968-69

Type of School	Basic Prog	Voc. Educ.	Spec. Educ.	Comp. Educ.	Health Service	Pupil Trans.	Lunch Prog.	Total
1. Prekindergarten		---				---		
2. Elementary Schools		---						
3. Junior High Schools		---						
4. Senior High Schools								
5. Adult Schools			---	---	---	---	---	
6. Summer Schools						---	---	
7. Special Schools								
8. Community Services		---	---		---	---	---	
Total All Schools								

III. SCOPE OF PROGRAM AND APPLICABLE INCOME: ALL SCHOOLS

	Basic Program	Voc. Educ.	Spec. Educ.	Comp. Educ.	Health Services	Pupil Transp.	Lunch Program	Other Programs
Expenditures								
Instruction								
Support Services								
Total Expenditures								
Applicable Income								
Fed. Categorical Aids		X		X			X	?
State Categorical Aids		X	X			X		?
State-Local Found. Prog.	X							?
Other (non-local tax)				X			X	?
Total Applicable Inc.								
Net Cost to Unrestricted Income								

IV. FISCAL SUMMARY - GENERAL FUND

	Completed Year	Current Year	Ensuing Year
I. Beginning Balance			
Cash in County Treasury @ Bank			
Other			
Adjustments to Accounts Receivable			
Less Current Liabilities			
Net Beginning Balance			
II. Income			
Federal Sources			
State Sources			
County Sources			
Local Sources			
Other Income			
Total Income			
III. Total Net Beginning Balance and Income			
IV. Estimated Expenditures & Reserves			
Program Expenditures			
Debt Service			
Outgoing Transfers			
Undistributed Reserve			
General Reserve			
Cash			
Other (Investments, Stores, etc.)			
Total Expenditures, Reserves And Other Outgo			